

WHAT IS CLAIMED IS:

1. A power transmitting system for a vehicle, in which driving force provided from a transmission coupled to a laterally mounted front drive engine is distributed to front and rear wheels through a transfer disposed behind said engine,
5 said transfer comprises:

a transmission shaft section;

a pair of bevel gear which changes a transmission direction of the driving force;

10 a first gear provided on said transmission shaft section having said transmission direction being changed by said bevel gear;

a second gear engaged with said first gear, which shifts an axis of said transmission shaft section in parallel;

15 an output shaft which is rotatably inserted into a gear shaft of said second gear so that the driving force is transmitted to said transmission shaft section; and

a coupling mechanism section which controls a transmission torque between said gear shaft of said second gear and said output shaft, wherein
20

said coupling mechanism section is disposed on an axis of said second gear, and is more closely to said engine than said second gear.

25 2. The power transmitting system according to claim

1, comprising:

a coupling mechanism-containing chamber which contains said coupling mechanism section independently provided in a transfer case of said transfer; and

5 a seal member made slidably contacted around said gear shaft of said second gear extendedly provided into said coupling mechanism-containing chamber in such a manner that a liquid tight separation between said coupling mechanism-containing chamber and other containing chambers containing
10 other parts is performed.

3. The power transmitting system according to claim 1, wherein said coupling mechanism section is a hydraulic multi
15 plate clutch.

4. The power transmitting system according to claim 1, wherein said coupling mechanism section is a coupling which generates a transmission torque depending on a difference between a front wheel rotation and a rear wheel rotation or
20 on an input torque.

5. A power transmitting system for a vehicle in which a laterally mounted front drive engine is provided, comprising:

25 a transmission which transmits a driving force, coupled

to said engine;

a gear mechanism;

a transmission shaft section to which the driving force is transmitted via said gear mechanism; and

5 an output shaft provided in said gear mechanism, an axis line thereof being arranged to locate at least one of above or below a vehicle constituting members provided in a width direction of the vehicle, the output shaft being formed into a hollow shaft having an inside face formed into a spline hole,

10 wherein an input shaft of said transmission shaft section is formed into a spline shaft, and said output shaft and said input shaft are slidably spline-fitted to each other.

6. The power transmitting system according to claim
15 5, wherein said output shaft has a helical gear which constitutes said gear mechanism at an outer peripheral portion thereof.

7. The power transmitting system according to
20 claims 5, wherein said input shaft comprises a narrowed section, a diameter of the narrowed section is adapted in corresponding to shapes of said vehicle constituting members in such a manner that transmission strength for the power to be transmitted is allowed.

25

8. The power transmitting system according to claim 5, wherein said gear mechanism comprises at least one pair of gears which shifts a direction of an output from said gear mechanism in parallel.

5

9. A power transmitting system for a vehicle in which a laterally mounted front drive engine is provided, comprising:

a differential gear unit;

10

a transmission shaft section; and

15

a gear mechanism provided in connection with said differential gear unit, which have a transaxle coupled to said engine and transmitting a power to said transmission shaft section via said gear mechanism so that the power is transmitted to a final reduction gear unit of rear wheels,

20

wherein said gear mechanism comprises bevel gears and helical gears, and wherein an input shaft of said transmission shaft section is formed into a spline shaft, and said output shaft and said input shaft are slidably spline-fitted to each other.

10. The power transmitting system according to claim 9, wherein said output shaft has a helical gear which constitutes said gear mechanism at an outer peripheral portion thereof.

25

11. The power transmitting system according to claims 9, wherein said input shaft comprises a narrowed section, a diameter of the narrowed section is adapted in corresponding to shapes of said vehicle constituting members so that transmission strength for the power to be transmitted is allowed.

12. The power transmitting system according to claim 9, wherein said gear mechanism comprises at least one pair of gears which shifts a direction of an output from said gear mechanism in parallel.

13. A power transmitting system for a vehicle in which a laterally mounted front drive engine is provided, comprising:

a differential gear unit;

a transmission shaft section;

a gear mechanism provided in connection with said differential gear unit, which have a transaxle coupled to said engine and transmitting a power to said transmission shaft section via said gear mechanism so that the power is transmitted to a final reduction gear unit of rear wheels,

wherein said gear mechanism comprises bevel gears and helical gears,

a flange joint is provided at an end of each of an output shaft of said gear mechanism and an input shaft of said transmission shaft section,

at least one of said output shaft and said input shaft is formed into a solid shaft being arranged to be located at least one of above or below vehicle constituting members provided in a width direction of the vehicle, and said output shaft and said input shaft are flange-coupled at one of front and backward of said vehicle constituting members.

10 14. The power transmitting system according to claim 13, wherein said output shaft has a helical gear which constitutes said gear mechanism at an outer peripheral portion thereof.

15 15. The power transmitting system according to claims 13, wherein said input shaft comprises a narrowed section, a diameter of the narrowed section is adapted in corresponding to a shape of said vehicle constituting members so that transmission strength for the power to be transmitted is allowed.

20 16. The power transmitting system according to claim 13, wherein said gear mechanism comprises at least one pair of gears which shifts a direction of an output from said gear

25

mechanism in parallel.

SECRET